ENGLISH (Original instructions)

INSTRUCTION MANUAL

Cordless Impact Driver

BTD043
BTD063
BTD103

013578

IMPORTANT: Read Before Using.

ENGLISH (Original instructions)

SPECIFICATIONS

Model		BTD043	BTD063	BTD103
Capacities	Machine screw	4 mm - 8 mm	4 mm - 8 mm	4 mm - 8 mm
	Standard bolt	5 mm - 10 mm	5 mm - 12 mm	5 mm - 12 mm
	High tensile bolt	5 mm - 6 mm	5 mm - 10 mm	5 mm - 10 mm
No load speed (min^{-1})		0 - 2,300	0 - 2,500	0 - 2,700
Impacts per minute		0 - 3,500	0 - 3,500	0 - 3,500
Overall length		144 mm	144 mm	144 mm
Standard battery cartridges ⚠Warning: Use only the battery cartridge(s) described.		BL1430A / BL1415NA	BL1430A / BL1415NA	BL1430A / BL1415NA
Net weight		1.2 kg / 1.0 kg	1.2 kg / 1.0 kg	1.2 kg / 1.0 kg
Rated voltage		D.C. 14.4 V	D.C. 14.4 V	D.C. 14.4 V

• Due to our continuing program of research and development, the specifications herein are subject to change without notice.

• Specifications and battery cartridge may differ from country to country.

• Weight, with battery cartridge, according to EPTA-Procedure 01/2003

END004-5

Symbols

The following show the symbols used for the equipment. Be sure that you understand their meaning before use.

· Read instruction manual.

· Only for EU countries
Do not dispose of electric equipment or battery pack together with household waste material!
In observance of European Directive 2012/19/EU on waste electric and electronic equipment, 2006/66/EC on batteries and accumulators and waste batteries and accumulators and their implementation in accordance with national laws, electric equipment and battery pack that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

ENE033-1

Intended use

The tool is intended for screw driving in wood, metal and plastic.

GEA006-2

General Power Tool Safety Warnings

⚠ **WARNING Read all safety warnings and all instructions.** Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

Work area safety

1. **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

Electrical safety

4. **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
5. **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.

6. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
7. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
8. **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.
9. **If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.** Use of an GFCI reduces the risk of electric shock.

Personal safety

10. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
11. **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
12. **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
13. **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
14. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
15. **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
16. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

Power tool use and care

17. **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
18. **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
19. **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
20. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
21. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
22. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
23. **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

Battery tool use and care

24. **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
25. **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
26. **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.
27. **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.

Service

28. **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.
29. **Follow instruction for lubricating and changing accessories.**
30. **Keep handles dry, clean and free from oil and grease.**

GEB054-1

CORDLESS IMPACT DRIVER SAFETY WARNINGS

1. **Hold power tool by insulated gripping surfaces, when performing an operation where the fastener may contact hidden wiring.** Fasteners contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
2. **Always be sure you have a firm footing.**
   Be sure no one is below when using the tool in high locations.
3. **Hold the tool firmly.**
4. **Wear ear protectors.**

SAVE THESE INSTRUCTIONS.

⚠WARNING:

DO NOT let comfort or familiarity with product (gained from repeated use) replace strict adherence to safety rules for the subject product.

MISUSE or failure to follow the safety rules stated in this instruction manual may cause serious personal injury.

ENC007-7

IMPORTANT SAFETY INSTRUCTIONS

FOR BATTERY CARTRIDGE

1. **Before using battery cartridge, read all instructions and cautionary markings on (1) battery charger, (2) battery, and (3) product using battery.**
2. **Do not disassemble battery cartridge.**
3. **If operating time has become excessively shorter, stop operating immediately. It may result in a risk of overheating, possible burns and even an explosion.**
4. **If electrolyte gets into your eyes, rinse them out with clear water and seek medical attention right away. It may result in loss of your eyesight.**
5. **Do not short the battery cartridge:**
   (1) **Do not touch the terminals with any conductive material.**
   (2) **Avoid storing battery cartridge in a container with other metal objects such as nails, coins, etc.**
   (3) **Do not expose battery cartridge to water or rain.**

   A battery short can cause a large current flow, overheating, possible burns and even a breakdown.
6. **Do not store the tool and battery cartridge in locations where the temperature may reach or exceed 50˚C (122˚F).**
7. **Do not incinerate the battery cartridge even if it is severely damaged or is completely worn out. The battery cartridge can explode in a fire.**
8. **Be careful not to drop or strike battery.**
9. **Do not use a damaged battery.**

SAVE THESE INSTRUCTIONS.

Tips for maintaining maximum battery life

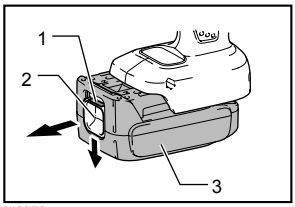
1. **Charge the battery cartridge before completely discharged.**
   Always stop tool operation and charge the battery cartridge when you notice less tool power.
2. **Never recharge a fully charged battery cartridge.**
   Overcharging shortens the battery service life.
3. **Charge the battery cartridge with room temperature at 10˚C - 40˚C (50˚F - 104˚F).**
   Let a hot battery cartridge cool down before charging it.
4. **Charge the battery cartridge once in every six months if you do not use it for a long period of time.**

FUNCTIONAL DESCRIPTION

⚠CAUTION:

- Always be sure that the tool is switched off and the battery cartridge is removed before adjusting or checking function on the tool.

Installing or removing battery cartridge



1. Red indicator
2. Button
3. Battery cartridge

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⚠CAUTION:

- Always switch off the tool before installing or removing of the battery cartridge.
- **Hold the tool and the battery cartridge firmly when installing or removing battery cartridge.** Failure to hold the tool and the battery cartridge firmly may cause them to slip off your hands and result in damage to the tool and battery cartridge and a personal injury.

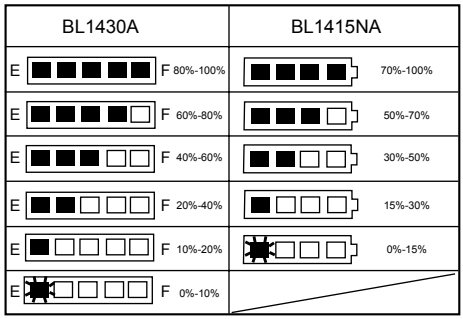
To remove the battery cartridge, slide it from the tool while sliding the button on the front of the cartridge.

To install the battery cartridge, align the tongue on the battery cartridge with the groove in the housing and slip it into place. Insert it all the way until it locks in place with a little click. If you can see the red indicator on the upper side of the button, it is not locked completely.

⚠CAUTION:

- Always install the battery cartridge fully until the red indicator cannot be seen. If not, it may accidentally fall out of the tool, causing injury to you or someone around you.
- Do not install the battery cartridge forcibly. If the cartridge does not slide in easily, it is not being inserted correctly.

Checking the remaining battery capacity



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When charging

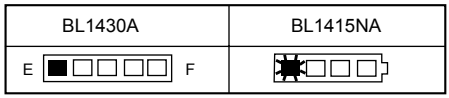
When the charging begins, the first (far left) indicating lamp begins to flicker. Then, as charging proceeds, the other lamps light, one after the other, to indicate the battery capacity.

When using

When the tool is switched on, the lamps will light to indicate the remaining battery capacity. When the tool is switched off, the light goes out after approx. 5 seconds. When the orange lamp lights up (or flickers) on BL1430A or flickers on BL1415NA, the tool stops because of little remaining battery capacity (Auto-stop mechanism). Charge the battery cartridge at this time or use a charged battery cartridge at this time.

When the tool is used with the battery that has not been used for a long time and is switched on, no lamps may light up. The tool stops because of little remaining battery capacity at this time. For BL1430A only, use Makita refreshing adapter to refresh the battery.

Auto-stop mechanism



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The tool stops automatically after the battery capacity reaches under 20% on BL1430A or 15% on BL1415NA to prevent the lack of fastening torque. Charge the battery or use a new fully charged one.

Battery protection system (BL1415NA)

The tool is equipped with a battery protection system. This system automatically cuts off power to the motor to extend battery life.

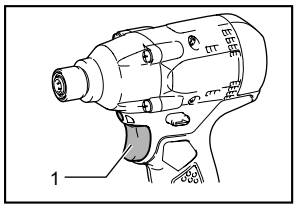
The tool will automatically stop during operation if the tool and/or battery are placed under the following conditions:

- Overloaded:
  The tool is operated in a manner that causes it to draw an abnormally high current.
  In this situation, release the switch trigger on the tool and stop the application that caused the tool to become overloaded. Then pull the switch trigger again to restart.
  If the tool does not start, the battery is overheated. In this situation, let the battery cool before pulling the switch trigger again.

NOTE:
The overheat protection works only with BL1415NA.

Switch action

⚠CAUTION:
- Before inserting the battery cartridge into the tool, always check to see that the switch trigger actuates properly and returns to the "OFF" position when released.



1. Switch trigger

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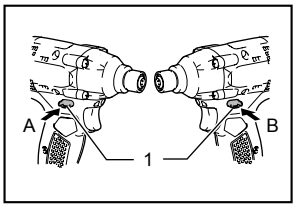
To start the tool, simply pull the switch trigger. Tool speed is increased by increasing pressure on the switch trigger. Release the switch trigger to stop.

Reversing switch action

⚠CAUTION:
- Always check the direction of rotation before operation.
- Use the reversing switch only after the tool comes to a complete stop. Changing the direction of rotation before the tool stops may damage the tool.
- When not operating the tool, always set the reversing switch lever to the neutral position.



1. Reversing switch lever

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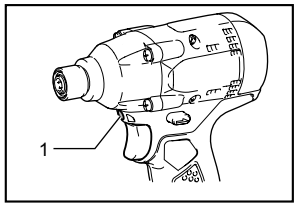
This tool has a reversing switch to change the direction of rotation. Depress the reversing switch lever from the A side for clockwise rotation or from the B side for counterclockwise rotation.
When the reversing switch lever is in the neutral position, the switch trigger cannot be pulled.

Turning on the lamp

⚠CAUTION:
- Do not look in the light or see the source of light directly.



1. Lamp

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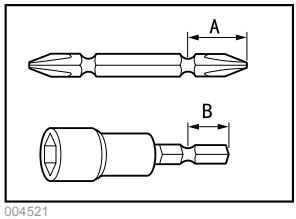
Pull the switch trigger to light up the lamp. The lamp keeps on lighting while the switch trigger is being pulled. The light automatically goes out 10 - 15 seconds after the switch trigger is released.

NOTE:
- Use a dry cloth to wipe the dirt off the lens of lamp. Be careful not to scratch the lens of lamp, or it may lower the illumination.

ASSEMBLY

⚠CAUTION:
- Always be sure that the tool is switched off and the battery cartridge is removed before carrying out any work on the tool.

Installing or removing driver bit or socket bit



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Use only the driver bit or socket bit shown in the figure. Do not use any other driver bit or socket bit.

For tool with shallow bit hole

A=12mm B=9mm	Use only these type of bit. Follow the procedure (1). (Note) Bit-piece is not necessary.

006348

For tool with deep bit hole

A=17mm B=14mm	To install these types of bits, follow the procedure (1).
A=12mm B=9mm	To install these types of bits, follow the procedure (2). (Note) Bit-piece is necessary for installing the bit.

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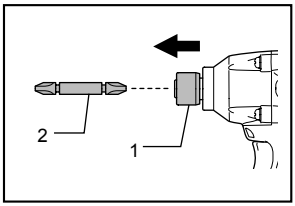

1. Sleeve
2. Bit

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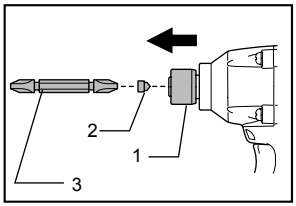
1. To install the bit, pull the sleeve in the direction of the arrow and insert the bit into the sleeve as far as it will go. Then release the sleeve to secure the bit.



1. Sleeve
2. Bit-piece
3. Bit

013581

2. To install the bit, pull the sleeve in the direction of the arrow and insert the bit-piece and bit into the sleeve as far as it will go. The bit-piece should be inserted into the sleeve with its pointed end facing in. Then release the sleeve to secure the bit.

To remove the bit, pull the sleeve in the direction of the arrow and pull the bit out firmly.

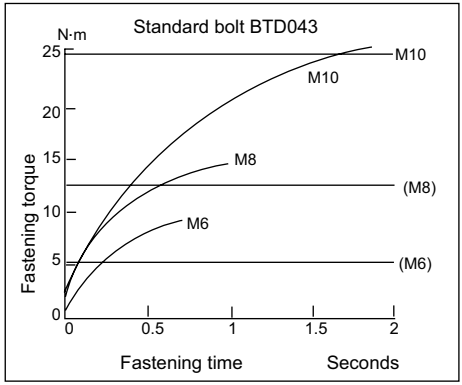
NOTE:

- If the bit is not inserted deep enough into the sleeve, the sleeve will not return to its original position and the bit will not be secured. In this case, try re-inserting the bit according to the instructions above.

OPERATION

The proper fastening torque may differ depending upon the kind or size of the screw/bolt, the material of the workpiece to be fastened, etc. The relation between fastening torque and fastening time is shown in the figures.

Hold the tool firmly and place the point of the driver bit in the screw head. Apply forward pressure to the tool to the extent that the bit will not slip off the screw and turn the tool on to start operation.



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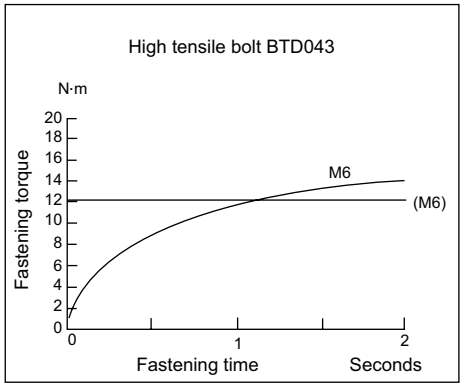

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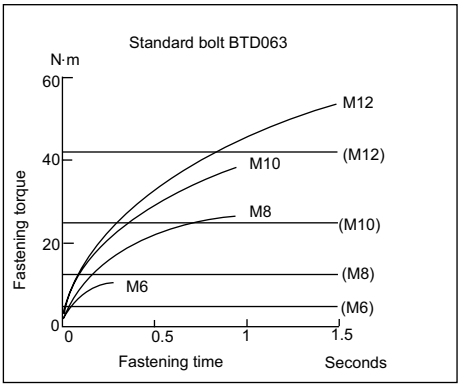

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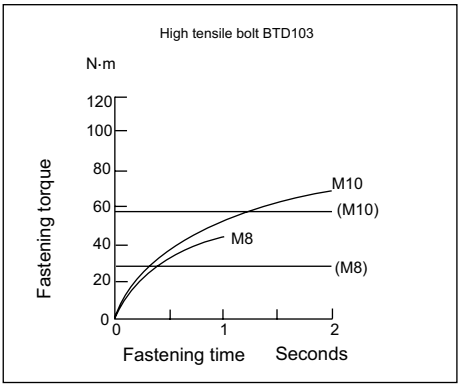

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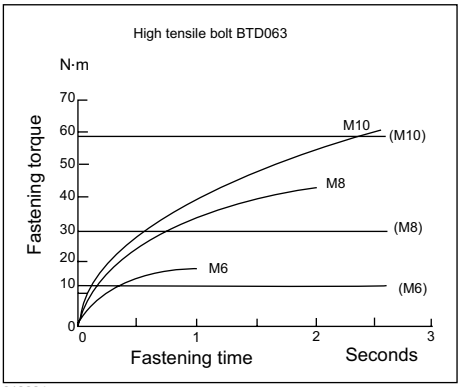

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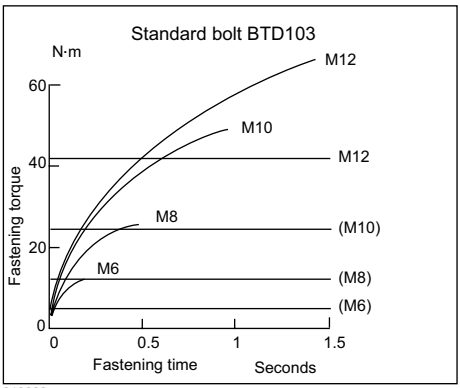

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NOTE:

- Use the proper bit for the head of the screw/bolt that you wish to use.
- Hold the tool pointed straight at the screw.
- If you tighten the screw for a time longer than shown in the figures, the screw or the point of the driver bit may be overstressed, stripped, damaged, etc. Before starting your job, always perform a test operation to determine the proper fastening time for your screw.
- If the tool is operated continuously until the battery cartridge has discharged, allow the tool to rest for 15 minutes before proceeding with a fresh battery.

The fastening torque is affected by a wide variety of factors including the following. After fastening, always check the torque with a torque wrench.

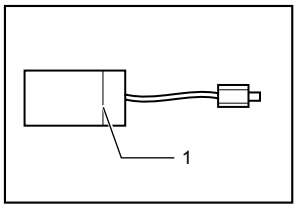
1. When the battery cartridge is discharged almost completely, voltage will drop and the fastening torque will be reduced.
2. Driver bit or socket bit
   Failure to use the correct size driver bit or socket bit will cause a reduction in the fastening torque.
3. Bolt
   - Even though the torque coefficient and the class of bolt are the same, the proper fastening torque will differ according to the diameter of bolt.
   - Even though the diameters of bolts are the same, the proper fastening torque will differ according to the torque coefficient, the class of bolt and the bolt length.
4. The manner of holding the tool or the material of driving position to be fastened will affect the torque.
5. Operating the tool at low speed will cause a reduction in the fastening torque.

MAINTENANCE

⚠CAUTION:

- Always be sure that the tool is switched off and the battery cartridge is removed before attempting to perform inspection or maintenance.
- Never use gasoline, benzine, thinner, alcohol or the like. Discoloration, deformation or cracks may result.

Replacing carbon brushes



1. Limit mark

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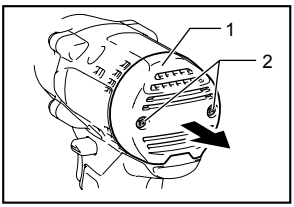
Replace when they wear down to the limit mark. Keep the carbon brushes clean and free to slip in the holders. Both carbon brushes should be replaced at the same time. Use only identical carbon brushes.



1. Rear cover
2. Screws

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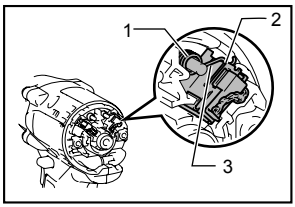
Use a screwdriver to remove two screws then remove the rear cover.



1. Spring
2. Recessed part
3. Arm

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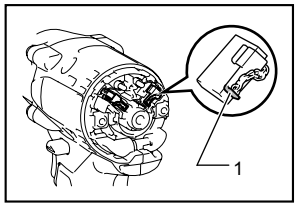
Raise the arm part of the spring and then place it in the recessed part of the housing with a slotted bit screwdriver of slender shaft or the like.



1. Carbon brush cap

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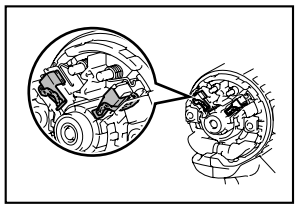
Use pliers to remove the carbon brush cap of the carbon brushes. Take out the worn carbon brushes, insert the new ones and replace the carbon brush cap in reverse.



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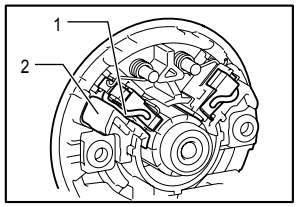
Make sure to place the lead wire in opposite side of the arm.



1. Lead wire
2. Spacer

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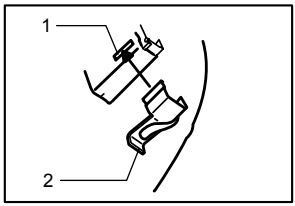
Put the lead wires between the spacer and the side of brush holder.



1. Hole
2. Carbon brush cap

006304

Make sure that the carbon brush caps fit into the holes in brush holders securely.

Reinstall the rear cover and tighten two screws securely.

To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by Makita Authorized Service Centers, always using Makita replacement parts.

OPTIONAL ACCESSORIES

⚠CAUTION:

- These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. Only use accessory or attachment for its stated purpose.

If you need any assistance for more details regarding these accessories, ask your local Makita Service Center.

- Phillips bit
- Socket bit
- Protector (white, blue, red)
- Battery Protector for BL1430A
- Battery Protector for BL1415NA
- Battery BL1430A
- Battery BL1415NA
- Makita genuine charger
- Automatic refreshing adapter for BL1430A only
- Bit piece

NOTE:

- Some items in the list may be included in the tool package as standard accessories. They may differ from country to country.

Makita Corporation

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